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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/872,412	BANKS ET AL.
	Examiner	Art Unit	
	Christopher P Grey	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 June 2001</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-45</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-45</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on <u>01 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Response to Amendments

1.   Responsive to the amendment after final received on November 16, 2005, the

claims 8, 9, 15-19, 29 and 30 are cancelled.

Claim Objections

2.   Claim 19 is objected to because of the following informalities: Claim 19 is

dependent on a cancelled claim (claim 18))

        Appropriate correction is required.

3.   **The text of those sections of Title 35, U.S. Code no included in this action**

can be found in a prior Office action.

4.   Claims 20, 21, 22, 31, 35, 39 and 42 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Wyatt (2005/0030948) in view of Lin et al. (US 20020131456),

hereinafter referred to as Lin.

Claim 20   Wyatt discloses transmitting frames of data from a first switch to a second

switch (see Fig 1A and page 1 paragraph 003) via a plurality of links (elements 132 c-e).

Wyatt discloses a group/trunk (element 134 in fig 1a) of links (page 1 paragraph

0005).

Wyatt discloses a plurality of first and second (egress and ingress) ports (page 1

paragraph 0003). The egress ports are coupled to a first switch and the ingress ports

being coupled to a second switch (both switches contain egress and ingress)

Wyatt discloses data being forwarded from the egress ports. Wyatt only vaguely

discloses transmit port routing.

Lin discloses I/O transmitters and receivers at each port, and logic within the port

for forwarding data to a destination (paragraph 0040).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to combine the logic as disclosed by Lin, within the ports as disclosed by

Wyatt. The motivation for this combination. The motivation for this combination is simply

to receive and transmit data from ports. Furthermore, the examiner notes that the claim

is taken in its broadest term, where port routing is equivalent to any routing function that

occurs within a port, including the mere transmission and reception of data.

Claim 21   Wyatt discloses the switch forwarding data packets to one of the egress

port queues (page 1 paragraph 0023) before data packets are forwarded (routed) on the

corresponding link (page 2 paragraph 0024).

Wyatt discloses data packets being evenly distributed among the physical links

(page 5 paragraph 0061).

Claim 22   Wyatt discloses storing ingress data in the egress data queue (page 2

paragraph 0031).

Wyatt also discloses the data packets being stored in the order that they are

received (page 2 paragraph 0025).

Claim 31   Wyatt discloses transmitting frames of data from a first switch to a second

switch (see Fig 1A and page 1 paragraph 003) in order (page 1 paragraph 007 and

abstract and page 2 paragraph 0024-0025).

Wyatt discloses the switch forwarding data packets to one of the egress port

queues (page 1 paragraph 0023).

Wyatt discloses data packets being evenly distributed among the physical links

(page 5 paragraph 0061).

Wyatt discloses the data flow being transmitted to the destination in the order

that they are received (page 2 paragraph 0025).

Wyatt does not specifically disclose receiving the frames in order at the plurality

of second ports.

Lin discloses two switches containing a plurality of ports connected through a

number of links connected via the ports on both switches (paragraph 0011).

Lin discloses a programmable delay element that may be varied in order to align

and synchronize the links, thus eliminating skew (paragraph 0045, 0046, 0049, **0053**).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to combine within each switch as disclosed by Wyatt, the programmable delay

element that makes up a variable delay circuit. The motivation for this combination is to

eliminate skewing between different links, therefore ensuring in order reception

(paragraph 0049 and 0053).

<u>Claim 35</u>   Wyatt discloses connecting a first switch to a second switch (page 1

paragraph 0003) via a number of ports connected by a number of links (page 1

paragraph 0008).

Wyatt discloses the switch forwarding data packets to one of the egress port

queues (page 1 paragraph 0023).

Wyatt discloses data packets being evenly distributed among the physical links

(page 5 paragraph 0061).

Wyatt discloses the data flow being transmitted by an egress port (page 2

paragraph 0027) to the destination in the order that they are received (page 2

paragraph 0025).

Wyatt does not specifically disclose receiving the frames in order at the plurality

of second ports.

Lin discloses two switches containing a plurality of ports connected through a

number of links connected via the ports on both switches (paragraph 0011).

Lin discloses a programmable delay element that may be varied in order to align and synchronize the links, thus eliminating skew (paragraph 0045, 0046, 0049, **0053**).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine within each switch as disclosed by Wyatt, the programmable delay element that makes up a variable delay circuit. The motivation for this combination is to eliminate skewing between different links, therefore ensuring in order reception (paragraph 0049 and 0053).

<u>Claim 39</u>   Wyatt discloses connecting a first switch to a second switch (page 1 paragraph 0003) via a number of ports connected by a number of links (page 1 paragraph 0008).

Wyatt discloses the switch forwarding data packets to one of the egress port queues (page 1 paragraph 0023).

Wyatt discloses a port selector dedicated for transmitting data packets in an evenly distributed manner among the physical links (page 5 paragraph 0061).

Wyatt discloses the data flow being transmitted by an egress port (page 2 paragraph 0027) to the destination in the order that they are received (page 2 paragraph 0025).

Wyatt does not specifically disclose receiving the frames in order at the plurality of second ports.

Lin discloses two switches containing a plurality of ports connected through a number of links connected via the ports on both switches (paragraph 0011).

Lin discloses a programmable delay element that may be varied in order to align and synchronize the links, thus eliminating skew (paragraph 0045, 0046, 0049, **0053**).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine within each switch as disclosed by Wyatt, the programmable delay element that makes up a variable delay circuit. The motivation for this combination is to eliminate skewing between different links, therefore ensuring in order reception (paragraph 0049 and 0053).

Claim 41   Wyatt discloses first and second switches and a plurality of links within an Ethernet environment (page 1 paragraph 0003 and 0008). Wyatt does not specifically disclose the switches and links being fibre channel environment, however it would have been obvious to one of the ordinary skill in the art at the time of the invention to realize that an Ethernet environment and a fibre channel environment share in common the concept of trunking together a number of ports/links and also both are high speed data environments, therefore equivocating the function of any switch or link within Wyatt's Ethernet environment, to a fibre channel switch or link.

Claim 42   Wyatt discloses a computer (page 1 paragraph 0002).

Wyatt discloses buffer memory (page 2 paragraph 0032).

Wyatt discloses a switch being connected to a computer (page 1 paragraph 0002).

Wyatt discloses a destination device having buffer memory for storage and a number of ingress ports (page 2 paragraph 0032).

Wyatt discloses connecting a first switch to a second switch (page 1 paragraph 0003) via a number of ports connected by a number of links (page 1 paragraph 0008).

Wyatt discloses the switch forwarding data packets to one of the egress port queues (page 1 paragraph 0023).

Wyatt discloses a port selector dedicated for transmitting data packets in an evenly distributed manner among the physical links (page 5 paragraph 0061).

Wyatt discloses the data flow being transmitted by an egress port (page 2 paragraph 0027) to the destination in the order that they are received (page 2 paragraph 0025).

Wyatt does not specifically disclose receiving the frames in order at the plurality of second ports.

Lin discloses two switches containing a plurality of ports connected through a number of links connected via the ports on both switches (paragraph 0011).

Lin discloses a programmable delay element that may be varied in order to align and synchronize the links, thus eliminating skew (paragraph 0045, 0046, 0049, **0053**).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine within each switch as disclosed by Wyatt, the programmable delay element that makes up a variable delay circuit. The motivation for this combination is to eliminate skewing between different links, therefore ensuring in order reception (paragraph 0049 and 0053).

5.   Claims 1, 2, 10-13, 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Muller et al. (US 6016310) in view of Wyatt (2005/0030948) in further

view of O'Keeffe et al. (US 6785286)

Claim 1   Muller et al. (Muller 'hereinafter') discloses a communication network

(element 130 in Fig 1) with 2 devices (switches- element 211 in Fig 2) connected via a

plurality of ports (elements 106-108 and 111-113 in Fig 1) by a plurality of links

(elements 115-117 in Fig 1).

Muller also discloses a forwarding database and control logic coupled to the

trunked ports (Col 1 line 63- Col 2 line 12).

Muller discloses a trunk group (element 140 in Fig 1) to which a number of

selected links are a part of. However Muller does not specifically disclose adding new

ports to the trunking grouping in response to determining if they qualify and selecting a

pair of trunking ports as master ports.

Wyatt discloses transmitting frames of data from a first switch to a second switch

(see Fig 1A and page 1 paragraph 003). Wyatt also discloses a database for storing

and learning ports to be introduced into a trunk group (page 3 paragraph 0046).

Wyatt discloses updating the database when a determination (port qualifies) has

been made (page 3 paragraph 0046).

Wyatt does not disclose selecting a pair of trunking ports as master ports.

However O'keeffe et al. ('O'Keeffe' hereinafter) discloses once a group of trunked ports

has been created, selecting a port to be a master port (Col 4 lines 22-45).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the forwarding database as disclosed by Muller with the updating of the forwarding database as disclosed by Wyatt in order to add a logical port to the trunking group (page 3 paragraph 0046). Furthermore it would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combined teachings of Muller and Wyatt with the function of selecting a master port as disclosed by O'Keeffe. The motivation for this modification is to allow a master port to decide which physical port of the trunk should be used for forwarding the packet (Col 1 lines 37-50).

Claim 2   Muller discloses ports (elements 106-108 and 111-113 in fig 1) coupled to each other creating an inter switch link (elements 115-117 in fig 1 and Col 1 lines 13-25). Muller does not specifically disclose the ports within a fibre channel environment, however it would have been obvious to one of the ordinary skill in the art at the time of the invention to realize that an Ethernet environment and a fibre channel environment share in common the concept of trunking together a number of ports/links and also both are high speed data environments, therefore equivocating any port within Muller's Ethernet environment, to an e_port.

Claim 10   Muller does not disclose determining that a new port does not belong to an existing trunked group and designating the new port as a trunking master port.

Wyatt discloses determining if a port is to be modified or learned by the database and updating the database where necessary (page 3 paragraph 0046).

Wyatt does not disclose designating the new port as a trunking master port.

However O'keeffe discloses once a group of trunked ports has been created, selecting

a port to be a master port (Col 4 lines 22-45)

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to make the modifications to Muller's invention with the teachings of Wyatt and

O'keeffe as is disclosed in the rejection of claim 1.

Claim 11   Muller discloses each input port receiving a forwarding decision indicating

the outbound ports upon which the corresponding packet should be transmitted. Also

prioritization information (list) may be included in the forwarding decision to facilitate

packet traffic though the switch (Col 5 lines 33-49).

That forwarding information is transmitted via a link for that period of time from an

output port of a first switch to an input port of a second switch.

Muller does not specifically disclose receiving at the second switch with in order

delivery.

Wyatt discloses the data flow being transmitted to the destination in the order

that they are received (page 2 paragraph 0025).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the transmission of packets as disclosed by Muller with in order

delivery as disclosed by Wyatt in order to avoid mis-ordered data (page 1 paragraph

0007).

Claim 12   Muller discloses load balancing, which involves the spreading of packets over different links of a trunk group (Col 6 lines 7-14). Muller does not disclose a master port comprising a transmit port for routing the frames.

O'Keeffe discloses a master port for forwarding packets (Col 4 lines 23-45). The motivation would have been the same as that for claim 1.

Claim 13   The combined teachings of Muller and O'keeffe do not disclose the other of the trunking master ports comprising a receive port queuing frames received over the trunked group.

Wyatt discloses an egress port queue to which a received data packet is stored before being forwarded (page 2 paragraph 0024).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the teachings of Muller, Wyatt and O'keeffe as disclosed by the rejection of this claim in order to limit traffic congestion and enable temporary storage via queuing.

Claim 15   Muller et al. (Muller 'hereinafter') discloses a communication network (element 130 in Fig 1) with 2 devices (switches- element 211 in Fig 2) connected via a plurality of ports (elements 106-108 and 111-113 in Fig 1) by a plurality of links (elements 115-117 in Fig 1).

Muller discloses a control logic and forwarding database coupled to the trunked ports (Col 1 lines 63- Col 2 lines 12). Furthermore the forwarding database coupled to any port controls the frames being routed over the trunked group.

Muller discloses a trunk group (element 140 in Fig 1) to which a number of selected links are a part of, but does not specifically disclose adding new ports to the trunking group in response to determining if they qualify. Muller also does not disclose queuing the traffic load.

Wyatt discloses transmitting frames of data from a first switch to a second switch (see Fig 1A and page 1 paragraph 003). Wyatt also discloses a database for storing and learning ports to be introduced into a trunk group (page 3 paragraph 0046).

Wyatt discloses updating the database when a determination (port qualifies) has been made (page 3 paragraph 0046).

Wyatt discloses an egress port queue to which a received data packet is stored before being forwarded (page 2 paragraph 0024).

Wyatt does not disclose selecting a pair of trunking ports as master ports. However O'keeffe et al. ('O'Keeffe' hereinafter) discloses once a group of trunked ports has been created, selecting a port to be a master port (Col 4 lines 22-45).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the forwarding database as disclosed by Muller with the updating of the forwarding database as disclosed by Wyatt in order to add a logical port to the trunking group (page 3 paragraph 0046). Furthermore it would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combined teachings of Muller and Wyatt with the function of selecting a master port as disclosed by O'Keeffe. The motivation for this modification is to allow a master port to decide

which physical port of the trunk should be used for forwarding the packet (Col 1 lines 37-50).

Claim 16   Muller does not disclose queuing the traffic load received through a queue associated with the master receive port in an order received.

Wyatt discloses an egress port queue to which a received data packet is stored before being forwarded (page 2 paragraph 0024).

Wyatt discloses the data flow being transmitted to the destination in the order that they are received (page 2 paragraph 0025). The rejection of claim 15 discloses a master port.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the teachings of Muller, Wyatt and O'keeffe in order to prevent out-of order delivery and limit congestion.

Claim 18   Muller discloses the switches being apart of a fabric in a communication network (Col 5 lines 22-32).

Claim 19   Muller discloses packets (frames) entering or leaving a network switch (disclosed in Col 4 lines 41-54).

6.   Claims 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller

et al. (US 6016310) in view of Wyatt (2005/0030948) in further view of O'Keeffe et al.

(US 6785286) in view of Lin et al. (US 20020131456), hereinafter referred to as Lin.

Claim 11   Muller discloses each input port receiving a forwarding decision indicating

the outbound ports upon which the corresponding packet should be transmitted. Also

prioritization information (list) may be included in the forwarding decision to facilitate

packet traffic though the switch (Col 5 lines 33-49).

        That forwarding information is transmitted via a link for that period of time from an

output port of a first switch to an input port of a second switch.

        Muller does not specifically disclose receiving at the second switch with in order

delivery.

        Wyatt discloses the data flow being transmitted to the destination in the order

that they are received (page 2 paragraph 0025). Wyatt does not specifically disclose

receiving the frames in order at the plurality of second ports.

        Lin discloses two switches containing a plurality of ports connected through a

number of links connected via the ports on both switches (paragraph 0011).

        Lin discloses a programmable delay element that may be varied in order to align

and synchronize the links, thus eliminating skew (paragraph 0045, 0046, 0049, **0053**).

        It would have been obvious to one of the ordinary skill in the art at the time of the

invention to combine within each switch as disclosed by Wyatt, the programmable delay

element that makes up a variable delay circuit. The motivation for this combination is to

eliminate skewing between different links, therefore ensuring in order reception

(paragraph 0049 and 0053).

7.   Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Muller et al. (US 6016310) in view Wyatt (US 20050030948) in view of O'keeffe et al.

(US 6785286) in further view of Kadambi et al. (US 6104696)

Claim 3   Muller discloses a trunk learning and filtering process, whereby

information from a register (link parameters) is used to select the trunk and port. These

registers contain information including the port number, trunk number field (first

identifier) and trunk size field. This information is sent to a learning and filtering block

where selection information is gathered in a forwarding port mask and ultimately sent

back (exchanged) to the input port that requested the forwarding decision (Col 7 lines

59- Col 8 lines 42), indicating a successful exchange. Muller does not disclose

determining whether a second identifier exists, the second identifier having a higher

value than that of the first.

Kadambi et al. (Kadambi 'hereinafter') discloses a system and method of sending

packets between ports on trunked network switches, where a first switch has a plurality

of ports coupled to a plurality of ports on a second switch. The packet is received on the

first switch and a lookup (request) is performed using a look up table (link parameters).

A trunk connection between the first and second switch is identified (first identifier), and

then a rules tag bit is identified (second identifier), as disclosed in Col 2 line 46- Col 3

line 32.

Therefore it would have been obvious for one skilled in the art at the time of the

invention to modify the combined teachings of Muller, Wyatt and O'keeffe which, with an

aspect of the invention disclosed by Kadambi which discloses selecting a new port

based on searching and using identifiers. The motivation for these modifications is to

increase the processing speed and prevent delay packet forwarding (disclosed in Col 2

lines 18-43).

<u>Claim 4</u>   The combined teachings of Muller, Wyatt ad O'keeffe disclose each

subsystem supporting gigabit Ethernet ports, fast Ethernet ports and Ethernet ports

(Muller: Col 3 line 65- Col 4 line 20), which World Wide Name (64 bit identifier) is a

subdivision of. The combined teachings of Muller, Wyatt ad O'keeffe also disclose a

MAC address (Muller: Col 1 lines 41-54), where most network technologies use a WWN

identifier such as a MAC address.

The motivation is the same as that for claim 3.

8.   Claim14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller

et al. (US 6016310) in view of Wyatt (2005/0030948) in view of O'keeffe et al. (US

6785286) in further view of Bertin et al. (US 6400681)

Claim 14   The combined teachings of Muller and Wyatt discloses routing packets

over a trunk and adding a port to a trunk group but do not disclose doing so prior to

performing link parameter initialization.

Bertin discloses routing data packet over a trunk and in addition (in no particular

order) updating information and maintaining a network topology including link utilization

(Col 7 lines 24-40)

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to combine the teachings of Muller and Wyatt with updating of the network

topology as disclosed by Bertin. The motivation for this combination is to store updated

data pertaining to the links in an Ethernet environment.

9.   Claims 23-27,41 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wyatt (2005/0030948) in view of Bertin et al. (US 6400681)

Claim 23   Wyatt discloses in order delivery of packets. However Wyatt does not

disclose a timer binding a particular list associated with the transmit port to a particular

link in the group for a period of time to ensure in order delivery of frames transmitted

across the group.

        Bertin discloses a topology database being constantly updated, this database

containing information (list) about link properties such as the propagation delay (Col 9

lines 32-60). The propagation delay is maintained for each link. One skilled in that art

can appreciate a means (timer) for maintaining the propagation delay.

        It would have been obvious to one of the ordinary skill in the art at the time of the

invention to combine the teachings of Wyatt with the maintenance of time with respect

to Bertin's invention (disclosed in Col 1 lines 44-59). The motivation for this combination

is to ensure that there is not a large delay in transmission.

Claim 24   Wyatt does not disclose a programmable time out constant register.

However Bertin discloses a time to live parameter (disclosed in Col 17 line 29-50). It

would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the teachings of Wyatt with a time to live parameter, which acts as a

time for expiration, and is commonly associated with a timer and CPU (register).

Claim 25   Wyatt discloses a number of ports within an Ethernet environment (page 1

paragraph 0008-0009). Wyatt does not specifically disclose the ports within a fabric

channel environment. However it would have been obvious to one of the ordinary skill in

the art at the time of the invention to realize that an Ethernet environment and a fibre

channel environment share in common the concept of trunking together a number of

ports/links and also both are high speed data environments, therefore equivocating any

port within Wyatt's invention as an e_port.

Claim 26   Wyatt discloses a number of logical links (ISL's) connecting switches

together (page 1 paragraphs 0003 and 0008).

Claim 27   Wyatt does not disclose a one-way link timer. However Bertin discloses a

propagation delay being maintained for each link. One skilled in that art can appreciate

a means (timer) for maintaining the propagation delay, where the time for a destination

port to receive a packet is used to calculate a propagation delay. The motivation is the

same as that for claim 23.

10.   Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wyatt (US 2005/0030948) in view of O'keeffe (US 6785286)

<u>Claim 15, 30</u> Wyatt discloses a plurality of first and second (egress and ingress) ports

(page 1 paragraph 0003). The egress ports are coupled to a first switch and the ingress

ports being coupled to a second switch (both switches contain egress and ingress)

Wyatt discloses the switch forwarding data packets to one of the egress port

queues (page 1 paragraph 0023).

Wyatt discloses data packets being evenly distributed among the physical links

(page 5 paragraph 0061).

Wyatt does not disclose designating one of the transmit ports as a master port.

However O'keeffe et al. ('O'Keeffe' hereinafter) discloses once a group of trunked ports

has been created, selecting a port to be a master port (Col 4 lines 22-45)

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the trunk port selector logic (page 1 paragraph 0008) as disclosed

by Wyatt with the function of selecting a master port as disclosed by O'Keeffe. The

motivation for this modification is to allow a master port to decide which physical port of

the trunk should be used for forwarding the packet (Col 1 lines 37-50).

<u>Claim 16</u>   Wyatt discloses transmitting packets across a trunking group.

Wyatt discloses the switch forwarding data packets to one of the egress port

queues (page 1 paragraph 0023).

Wyatt also discloses the data flow being transmitted to the destination in the

order that they are received (page 2 paragraph 0025).

The rejection of claim 15 discloses a master port.

Claim 17   Wyatt discloses stored egress (transmit) data (list).

Wyatt discloses forwarding egress data to an egress port (transmit port), where each port has a corresponding link by which to transmit data (page 2 paragraphs 0032-0033)

Wyatt discloses the data flow being transmitted to the destination in the order that they are received (page 2 paragraph 0025).

11.   Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Wyatt (2005/0030948) view of O'keeffe (US 6785286) in further view of Muller et

al. (US 6016310)

Claim 18   The combined teachings of Wyatt and O'keeffe disclose interconnecting

switches. However the combined teachings of Wyatt and O'keeffe do not specifically

disclose a switch fabric.

Muller discloses the switches being apart of a fabric in a communication network

(Col 5 lines 22-32).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the combined teachings of Wyatt and O'keeffe with the switching

fabric as disclosed by Muller in order to achieve point to point (device to device)

pathways from one switch to another.

Claim 19   Wyatt discloses data packets (frames) being forwarded (page 2 paragraph

0025).

12.   Claim 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyatt

(2005/0030948) view of Bertin et al. (US 6400681) in further view of Muller et al. (US

6016310)

Claim 28   The combined teachings of Wyatt and Bertin disclose interconnecting

switches. However the combined teachings of Wyatt and Bertin do not specifically

disclose a switch fabric.

Muller discloses the switches being apart of a fabric in a communication network

(Col 5 lines 22-32).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combined teachings of Wyatt and Bertin with the switching fabric as disclosed by Muller in order to achieve point to point (device to device) pathways from one switch to another.

Allowable Subject Matter

13.   Claims 5, 6, 7, 32, 33, 34, 36, 37, 38, 40, 43, 44, 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14.   Applicant's arguments with respect to claims 31, 35, 39, 42, 20, 1, 11, 5, 6, 23, 24, 32, 36, 40 and 43 have been considered but are moot in view of the new ground(s) of rejection.

15.   Applicant's arguments filed July 19, 2005 have been fully considered but they are not persuasive.

(a)   The applicant argued that the cited art does not disclose the applicants claimed, "selectively controlling the frames routed over the trunked group to the second switch."

The examiner maintains that the same limitation in its broadest term is already disclosed within the rejection of claim 1, wherein the examiner notes that the claim is taken in its broadest term, where port routing is equivalent to any routing function that occurs within a port, including the mere transmission and reception of data. Also controlling the frames taken in its broadest interpretation is equivalent to transmitting data.
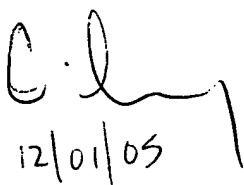
16.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Christopher P. Grey whose telephone number is

(571)272-3160. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Grey
Examiner
Art Unit 2667

12\01\05

CHI PHAM
PERVISORY PATENT EXAMINER

12/07/05